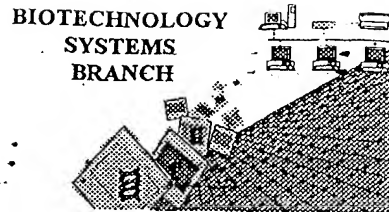# RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/674,124

Source: CRF

Date Processed by STIC: 10-8-03

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:
1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY
FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE <u>CHECKER VERSION 4.1 PROGRAM</u>, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:
<u>http://www.uspto.gov/web/offices/pac/checker/chkr41note.htm</u>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.
Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.
<u>Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:</u>

1. EFS-Bio (<u><http://www.uspto.gov/ebc/efs/downloads/documents.htm></u> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry directly to (EFFECTIVE 12/01/2003):
   U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 10/08/2003

Raw Sequence Listing Error Summary

ERROR DETECTED	SUGGESTED CORRECTION	SERIAL NUMBER: 10/674,124

1____ Wrapped Nucleics
Wrapped Aminos

The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."

2____ Invalid Line Length

The rules require that a line not exceed 72 characters in length. This includes white spaces.

3____ Misaligned Amino Numbering

The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use **space characters**, instead.

4____ Non-ASCII

The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.

5____ Variable Length

Sequence(s)____ contain n's or Xaa's representing more than one residue. **Per Sequence Rules, each n or Xaa can only represent a single residue.** Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.

6____ PatentIn 2.0 "bug"

A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. **This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.**

7____ Skipped Sequences (OLD RULES)

Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence:
(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 (i)   SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
This sequence is intentionally skipped

Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.

8____ Skipped Sequences (NEW RULES)

Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence.
<210> sequence id number
<400> sequence id number
000

9__X__ Use of n's or Xaa's (NEW RULES)

Use of n's and/or Xaa's have been detected in the Sequence Listing.
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

10____ Invalid <213> Response

Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence

11__X__ Use of <220>

Sequence(s) 27087, 27119 missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32)   (Sec. 1.823 of Sequence Rules)

12____ PatentIn 2.0 "bug"

Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

13____ Misuse of n/Xaa

"n" can only represent a single <u>nucleotide</u>; "Xaa" can only represent a single <u>amino acid</u>

AMC – Biotechnology Systems Branch – 09/09/2003

II

RAW SEQUENCE LISTING   DATE: 10/08/2003
PATENT APPLICATION: US/10/674,124   TIME: 13:16:54

    Input Set : D:\seqlist.txt
    Output Set: N:\CRF4\10082003\J674124.raw

```
 3 <110> APPLICANT: INOKO, Hidetoshi
 4        TAMIYA, Gen
 7 <120> TITLE OF INVENTION: GENE MAPPING METHOD USING MICROSATELLITE
 8        GENETIC POLYMORPHISM MARKERS
11 <130> FILE REFERENCE: TECH-003CIP
13 <140> CURRENT APPLICATION NUMBER: US/10/674,124
14 <141> CURRENT FILING DATE: 2003-09-26
16 <150> PRIOR APPLICATION NUMBER: 10/257,511
17 <151> PRIOR FILING DATE: 2003-03-07
19 <150> PRIOR APPLICATION NUMBER: PCT/JP00/07621
20 <151> PRIOR FILING DATE: 2000-10-30
22 <150> PRIOR APPLICATION NUMBER: JP2000-112699
23 <151> PRIOR FILING DATE: 2000-04-13
25 <150> PRIOR APPLICATION NUMBER: JP2002-327516
26 <151> PRIOR FILING DATE: 2002-09-28
28 <150> PRIOR APPLICATION NUMBER: JP2002-383869
29 <151> PRIOR FILING DATE: 2002-12-09
31 <160> NUMBER OF SEQ ID NOS: 27110
33 <210> SEQ ID NO: 1
34 <211> LENGTH: 466
35 <212> TYPE: DNA
36 <213> ORGANISM: Homo sapiens
38 <220> FEATURE:
39 <223> OTHER INFORMATION: chr8.fa.07frz.212765
41 <220> FEATURE:
42 <223> OTHER INFORMATION: Located on chromosome 1
44 <220> FEATURE:
45 <223> OTHER INFORMATION: Distance between a terminus base of telomere on
46        chromosomal short arm and 5'-terminus of this base
47        sequence : 8211
49 <220> FEATURE:
50 <223> OTHER INFORMATION: Distance between 3'-terminus of neighbour sequence of
51        sequence listing upward to telomere on chrosomal short arm and
52        5'-terminus of this base sequence : 0
54 <400> SEQUENCE: 1
55 agatggatga tagatcattg atagatgata ggtagatagt agatagatta taggtagata    60
57 aatagatgga tgatggatgg atgatagata cttgattgat agatgatagg tagatagtag   120
59 atagatgata gataatgata gatgatagct agatagtaga tagatgtgat aggtagatgg   180
61 tagatagaga tgatgataga tggatgatag atggatggat ggatgatagg tgattgatag   240
63 atggtagata ggtggatggt agagatggta gataaataga tggatgatgg atggatgata   300
65 gagagctgat agtagataag gtagatagta gatagatgat agatggatgg atgatagatg   360
67 attgatagag agatagagag agaaggatga tagactgagc atcataactt cactgaatgc   420
69 taccagttgg attcaaaagt cagcaaactg aaacgtcgaa tttcag                  466
```

Does Not Comply
Corrected Diskette Needed

P.6

RAW SEQUENCE LISTING   DATE: 10/08/2003
PATENT APPLICATION: US/10/674,124   TIME: 13:16:54

Input Set : D:\seqlist.txt
Output Set: N:\CRF4\10082003\J674124.raw

```
72  <210> SEQ ID NO: 2
73  <211> LENGTH: 207
74  <212> TYPE: DNA
75  <213> ORGANISM: Homo sapiens
77  <220> FEATURE:
78  <223> OTHER INFORMATION: DISD22_0011793
80  <220> FEATURE:
81  <223> OTHER INFORMATION: Located on chromosome 1
83  <220> FEATURE:
84  <223> OTHER INFORMATION: Distance between a terminus base of telomere on
85        chromosomal short arm and 5'-terminus of this base
86        sequence : 100269
88  <220> FEATURE:
89  <223> OTHER INFORMATION: Distance between 3'-terminus of neighbour sequence of
90        sequence listing upward to telomere on chrosomal short arm and
91        5'-terminus of this base sequence : 91592
93  <400> SEQUENCE: 2
94  aaccagtgct tagcagacgc cgtccctcag gatgcaggca cacgcacaca cacacacaca     60
96  cacatgcaca cgcacacaca tgaacacaca tggacacgcg aacacacaca tgcacacgta    120
98  cacacgtgtg ctgacacgcg gatgctgggc cagggctcac cactccaacg cggggtcctg    180
100 gcagcccagc gggtaccaga gctcaat                                       207
103 <210> SEQ ID NO: 3
104 <211> LENGTH: 271
105 <212> TYPE: DNA
106 <213> ORGANISM: Homo sapiens
108 <220> FEATURE:
109 <223> OTHER INFORMATION: DISO7_10007615
111 <220> FEATURE:
112 <223> OTHER INFORMATION: Located on chromosome 1
114 <220> FEATURE:
115 <223> OTHER INFORMATION: Distance between a terminus base of telomere on
116        chromosomal short arm and 5'-terminus of this base
117        sequence : 706251
119 <220> FEATURE:
120 <223> OTHER INFORMATION: Distance between 3'-terminus of neighbour sequence of
121        sequence listing upward to telomere on chrosomal short arm and
122        5'-terminus of this base sequence : 605775
124 <400> SEQUENCE: 3
125 tgtgaacttc aaactctcag ggttttctga ggaataaaga gggtttttgc aaaatggagt     60
127 cagggtcgcc ttctgttttt tctttctttc tttctttctt tttttttttt ttgagaagga    120
129 gcctcgctct gtcccaaggt tggagtgcaa tggcaggatc ttggctcact gcaacctctg    180
131 cctcccgggt tcaagtgatt ctctacctct gcctcctgag tagctgggac tacaagcacg    240
133 tgccatgtgt agagatggca tctcactgtg t                                   271
136 <210> SEQ ID NO: 4
137 <211> LENGTH: 123
138 <212> TYPE: DNA
139 <213> ORGANISM: Homo sapiens
141 <220> FEATURE:
142 <223> OTHER INFORMATION: DISO7_10000554
```

RAW SEQUENCE LISTING   DATE: 10/08/2003
PATENT APPLICATION: US/10/674,124   TIME: 13:16:54

Input Set : D:\seqlist.txt
Output Set: N:\CRF4\10082003\J674124.raw .

```
144 <220> FEATURE:
145 <223> OTHER INFORMATION: Located on chromosome 1
147 <220> FEATURE:
148 <223> OTHER INFORMATION: Distance between a terminus base of telomere on
149       chromosomal short arm and 5'-terminus of this base
150       sequence : 1020587
152 <220> FEATURE:
153 <223> OTHER INFORMATION: Distance between 3'-terminus of neighbour sequence of
154       sequence listing upward to telomere on chrosomal short arm and
155       5'-terminus of this base sequence : 314065
157 <400> SEQUENCE: 4
158 acgcagattg gtctgtcccc agagggcgct tggagggcag cggaaggatt cgggcctgga      60
160 taggggcttg acctagccct cctcctcctc ctcctcctcc tcctcgaagt gggcttgctt     120
162 ctt                                                                   123
165 <210> SEQ ID NO: 5
166 <211> LENGTH: 410
167 <212> TYPE: DNA
168 <213> ORGANISM: Homo sapiens
170 <220> FEATURE:
171 <223> OTHER INFORMATION: chr1.fa.07frz.1780396
173 <220> FEATURE:
174 <223> OTHER INFORMATION: Located on chromosome 1
176 <220> FEATURE:
177 <223> OTHER INFORMATION: Distance between a terminus base of telomere on
178       chromosomal short arm and 5'-terminus of this base
179       sequence : 1105774
181 <220> FEATURE:
182 <223> OTHER INFORMATION: Distance between 3'-terminus of neighbour sequence of
183       sequence listing upward to telomere on chrosomal short arm and
184       5'-terminus of this base sequence : 85064
186 <400> SEQUENCE: 5
187 gctaactttc atctttagtc acatgcaaag agaaaaaaac cagacggact tctttttcat      60
189 agttaatagc agaaattatt atagcactct gctgtgccaa cattgagtt tcaattcaga      120
191 gactcaaaac ctacgtttgt caattttttt taaaaaggcg tattcctggc tgggcatggt     180
193 gggctataat cccaacactt taggaggtca agtcgggagg actgcttgaa tccagcagtt     240
195 tgcgaccagc ctgggcaata tggcaaaacg ctgtgtacac acacacatac acacatacac     300
197 acacacacac acacaatttt tgttagcaat aaaaataaat ttcctggtca ggccctcttc     360
199 agtccacaca tagaagtgat aagaaaaatc tattgtcagg catttcaatt                410
202 <210> SEQ ID NO: 6
203 <211> LENGTH: 102
204 <212> TYPE: DNA
205 <213> ORGANISM: Homo sapiens
207 <220> FEATURE:
208 <223> OTHER INFORMATION: DISD22_0011809
210 <220> FEATURE:
211 <223> OTHER INFORMATION: Located on chromosome 1
213 <220> FEATURE:
214 <223> OTHER INFORMATION: Distance between a terminus base of telomere on
215       chromosomal short arm and 5'-terminus of this base
```

RAW SEQUENCE LISTING   DATE: 10/08/2003
PATENT APPLICATION: US/10/674,124   TIME: 13:16:54

Input Set : D:\seqlist.txt
Output Set: N:\CRF4\10082003\J674124.raw

```
216      sequence : 1238096
218 <220> FEATURE:
219 <223> OTHER INFORMATION: Distance between 3'-terminus of neighbour sequence of
220      sequence listing upward to telomere on chrosomal short arm and
221      5'-terminus of this base sequence : 131912
223 <400> SEQUENCE: 6
224 cagaggacgc agagctaaga aagttgggac cttttttttt tcagcactac acacacacac    60
226 acacacacga actgcagggg gctctggagc catggagtta ga                      102
229 <210> SEQ ID NO: 7
230 <211> LENGTH: 162
231 <212> TYPE: DNA
232 <213> ORGANISM: Homo sapiens
234 <220> FEATURE:
235 <223> OTHER INFORMATION: D1S243
237 <220> FEATURE:
238 <223> OTHER INFORMATION: Located on chromosome 1
240 <220> FEATURE:
241 <223> OTHER INFORMATION: Distance between a terminus base of telomere on
242      chromosomal short arm and 5'-terminus of this base
243      sequence : 1525955
245 <220> FEATURE:
246 <223> OTHER INFORMATION: Distance between 3'-terminus of neighbour sequence of
247      sequence listing upward to telomere on chrosomal short arm and
248      5'-terminus of this base sequence : 287757
250 <400> SEQUENCE: 7
251 gctccagcgt catggacttt tccggccttg ggtcgaggcc tcagcgattc aggcggggcc    60
253 gttttggtaa cacccgtgtg tgtgtgtgtg tgtgtgtgtg tgtgtgtgtg tgtgtgtgtg   120
255 tccgtgcgcg cgcgcatgcg tgcaggcatg tgagcctgtg tg                      162
258 <210> SEQ ID NO: 8
259 <211> LENGTH: 283
260 <212> TYPE: DNA
261 <213> ORGANISM: Homo sapiens
263 <220> FEATURE:
264 <223> OTHER INFORMATION: DISO7_10007619
266 <220> FEATURE:
267 <223> OTHER INFORMATION: Located on chromosome 1
269 <220> FEATURE:
270 <223> OTHER INFORMATION: Distance between a terminus base of telomere on
271      chromosomal short arm and 5'-terminus of this base
272      sequence : 1667184
274 <220> FEATURE:
275 <223> OTHER INFORMATION: Distance between 3'-terminus of neighbour sequence of
276      sequence listing upward to telomere on chrosomal short arm and
277      5'-terminus of this base sequence : 141067
279 <400> SEQUENCE: 8
280 ctgtcaccga gaagggacct gggctggcct ttcctttgcc tttttaaata ttttatttta    60
282 ttttatattt tattttatttt tattttattt tattttatttt attttatttt attttatttt   120
284 attttatttt attttatttt aatcatagag atgggcctc cctttgtggc ccaggctggc    180
286 cttgaactcc tgagttcaag caatcctccc gcctcagcct cccaaagtgc tgggatcacg    240
```

RAW SEQUENCE LISTING   DATE: 10/08/2003
PATENT APPLICATION: US/10/674,124   TIME: 13:16:54

Input Set : D:\seqlist.txt
Output Set: N:\CRF4\10082003\J674124.raw

288 ggcgtggccc cgcgccagct cccctgcctt tcctgaggca tag   283
291 <210> SEQ ID NO: 9
292 <211> LENGTH: 260
293 <212> TYPE: DNA
294 <213> ORGANISM: Homo sapiens
296 <220> FEATURE:
297 <223> OTHER INFORMATION: DISD22_0011823
299 <220> FEATURE:
300 <223> OTHER INFORMATION: Located on chromosome 1
302 <220> FEATURE:
303 <223> OTHER INFORMATION: Distance between a terminus base of telomere on
304   chromosomal short arm and 5'-terminus of this base
305   sequence : 2173981
307 <220> FEATURE:
308 <223> OTHER INFORMATION: Distance between 3'-terminus of neighbour sequence of
309   sequence listing upward to telomere on chrosomal short arm and
310   5'-terminus of this base sequence : 506514
312 <400> SEQUENCE: 9
313 tccatcagtc tagctggaag attttagtta aaaaaaggct gtgtgtgtgt gtgtgtgtgt   60
315 gtgtgtgtgt gtgtgtgtgt gtctgtctgt ctgtctgtct gtctgcctag gtagatggat   120
317 ggagaaatgg gcggatggat gaatgggtgg atggatggat agatggatag atgaatgaat   180
319 ggacagatgg atatgtgagt gtgtgtgtgt gtgtgtgtct gtgtctgtct gtctgtctag   240
321 gtagtcagat ggataaatgc   260
324 <210> SEQ ID NO: 10
325 <211> LENGTH: 142
326 <212> TYPE: DNA
327 <213> ORGANISM: Homo sapiens
329 <220> FEATURE:
330 <223> OTHER INFORMATION: DISD22_0011835
332 <220> FEATURE:
333 <223> OTHER INFORMATION: Located on chromosome 1
335 <220> FEATURE:
336 <223> OTHER INFORMATION: Distance between a terminus base of telomere on
337   chromosomal short arm and 5'-terminus of this base
338   sequence : 2407733
340 <220> FEATURE:
341 <223> OTHER INFORMATION: Distance between 3'-terminus of neighbour sequence of
342   sequence listing upward to telomere on chrosomal short arm and
343   5'-terminus of this base sequence : 233492
345 <400> SEQUENCE: 10
346 gaaattaggt caagacgtat gcatgtgcgt gtttgtgtgt gtgtgtgtgt gtgtgtgtgt   60
348 gtgttggttt attgctcatg aaagcagatt tgaatttctt ttaagagtgt agccaattct   120
350 ctcattatcc aactcagttt cc   142
353 <210> SEQ ID NO: 11
354 <211> LENGTH: 245
355 <212> TYPE: DNA
356 <213> ORGANISM: Homo sapiens
358 <220> FEATURE:
359 <223> OTHER INFORMATION: DISO7_10007628

```
<210>   27089
<211>   28
<212>   DNA
<213>   Artificial
```

See page 8 on error summary report.

```
<400>   27089
aatagccatg agaagctatg tgggggag                                              28
```

```
<210>   27090
<211>   29
<212>   DNA
<213>   Artificial
```

```
<400>   27090
ctacctcctt gccaaacttg ctgtttgtg
```

<210> 863
<211> 201
<212> DNA
<213> Homo sapiens

<220>
<223> DISD22_0000537

<220>
<223> Located on chromosome 1

<220>
<223> Distance between a terminus base of telomere on
chromosomal short arm and 5'-terminus of this base
sequence : 90759656

<220>
<223> Distance between 3'-terminus of neighbour sequence of
sequence listing upward to telomere on chrosomal short arm and
5'-terminus of this base sequence : 295398

<400> 863
ttctccttca gaccctctga aaaaaaatgt tacctttttg aggatggctc tctatttttt   60

tctccctagc ccctatgttt taaaaaagct aagngtgtgt gtgtgtgtgt gtgtgtgtgt   120

gtgtgtgtgt gtgtgtgttt tgaagggagc aggcacaaaa gggaggggag tggaaagtaa   180

ttattatcat cccaacgtct t   201

*No explanation given for "n"
See item 9 on error summary
sheet.*

```
<210>   912
<211>   259
<212>   DNA
<213>   Homo sapiens

<220>
<223>   AL157410.5_47389

<220>
<223>   Located on chromosome 1

<220>
<223>   Distance between a terminus base of telomere on
chromosomal short arm and 5'-terminus of this base
sequence : 96466263

<220>
<223>   Distance between 3'-terminus of neighbour sequence of
sequence listing upward to telomere on chrosomal short arm and
5'-terminus of this base sequence : 97275

<400>   912
gacactcagc ctcatcgagg atgcagagag aaaataactc gatggagaga agcaagcatt        60

agggggggtta aatgaccagg ttggtggggg gaattaaatt atagacggtc ttaaaaaaca      120

ggcaggggag gttttttctgt ttttgt(n)tc gttttgtttt gttttgtttt gttttgtttt     180

aaagacagga tcgcactctg ttgcccaggc tggagtacag tggcaccaac atagctcact      240

gtaacttcaa actccagga                                                    259
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 10/08/2003
PATENT APPLICATION: US/10/674,124   TIME: 13:16:55

Input Set : D:\seqlist.txt
Output Set: N:\CRF4\10082003\J674124.raw

ase Note:
  of n and/or Xaa have been detected in the Sequence Listing. Please review the
uence Listing to ensure that a corresponding explanation is presented in the <220>
<223> fields of each sequence which presents at least one n or Xaa.

```
#:28;   N Pos.  34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53
#:28;   N Pos.  54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73
#:28;   N Pos.  74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93
#:28;   N Pos.  94,95,96,97,98,99,100,101,102,103,104,105,106,107,108,109
#:28;   N Pos.  110,111,112,113,114,115,116,117,118,119,120,121,122,123,124
#:28;   N Pos.  125,126,127,128,129,130,131,132,133
#:863;  N Pos.  94
#:912;  N Pos.  147
#:3742; N Pos.  71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89
#:3742; N Pos.  90,91,92,93,94,95,96,97,98,99,100,101,102,103,104,105,106
#:3742; N Pos.  107,108,109,110,111,112,113,114,115,116,117,118,119,120
#:3742; N Pos.  121,122,123,124,125,126,127,128,129,130,131,132,133,134
#:3742; N Pos.  135,136,137,138,139,140,141,142,143,144,145,146,147,148
#:3742; N Pos.  149,150,151,152,153,154,155,156,157,158,159,160,161,162
#:3742; N Pos.  163,164,165,166,167,168,169,170
#:3745; N Pos.  143,144
#:3746; N Pos.  143,144
#:4010; N Pos.  207,211,212,214,216,243,245,247,249,254,256,258,263,265
#:4010; N Pos.  267,269,271,275,278
#:4931; N Pos.  181,231,233
#:4934; N Pos.  6
#:4935; N Pos.  198
#:4936; N Pos.  91,108
#:5073; N Pos.  298
#:5452; N Pos.  312
#:5742; N Pos.  331,339
#:5895; N Pos.  157,158,159,160,161,162,163,164,165,166,167,168,169,170
#:5895; N Pos.  171,172,173,174,175,176,177,178,179,180,181,182,183,184
#:5895; N Pos.  185,186,187,188,189,190,191,192,193,194,195,196,197,198
#:5895; N Pos.  199,200,201,202,203,204,205,206,207,208,209,210,211,212
#:5895; N Pos.  213,214,215,216,217,218,219,220,221,222,223,224,225,226
#:5895; N Pos.  227,228,229,230,231,232,233,234,235,236,237,238,239,240
#:5895; N Pos.  241,242,243,244,245,246,247,248,249,250,251,252,253,254
#:5895; N Pos.  255,256
#:5994; N Pos.  67
#:6080; N Pos.  393,449
#:6525; N Pos.  262,263,264,265,266,267,268,269,270,271,272,273,274,275
#:6525; N Pos.  276,277,278,279,280,281,282,283,284,285,286,287,288,289
#:6525; N Pos.  290,291,292,293,294,295,296,297,298,299,300,301,302,303
#:6525; N Pos.  304,305,306,307,308,309,310,311,312,313,314,315,316,317
#:6525; N Pos.  318,319,320,321,322,323,324,325,326,327,328,329,330,331
#:6525; N Pos.  332,333,334,335,336,337,338,339,340,341,342,343,344,345
#:6525; N Pos.  346,347,348,349,350,351,352,353,354,355,356,357,358,359
#:6525; N Pos.  360,361
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 10/08/2003
PATENT APPLICATION: US/10/674,124   TIME: 13:16:55

Input Set : D:\seqlist.txt
Output Set: N:\CRF4\10082003\J674124.raw

```
#:7259; N Pos. 59
#:7624; N Pos. 97,99
#:7989; N Pos. 71
#:8303; N Pos. 49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67
#:8303; N Pos. 68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86
#:8303; N Pos. 87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103
#:8303; N Pos. 104,105,106,107,108,109,110,111,112,113,114,115,116,117
```

<u>alid <213> Response:</u>
  of "Artificial" only as "<213> Organism" response is incomplete,
  1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

```
#:27089,27090,27091,27092,27093,27094,27095,27096,27097,27098,27099,27100
#:27101,27102,27103,27104,27105,27106,27107,27108,27109,27110
```

<u>of <220> Feature(NEW RULES):</u>
uence(s) are missing the <220> Feature and associated headings.
  of <220> to <223> is MANDATORY if <213> ORGANISM is "Artificial Sequence"
Unknown". Please explain source of genetic material in <220> to <223>
tion (See "Federal Register," 6/01/98, Vol. 63, No. 104,pp.29631-32)
c.1.823 of new Rules)

```
#:27089,27090,27091,27092,27093,27094,27095,27096,27097,27098,27099,27100
#:27101,27102,27103,27104,27105,27106,27107,27108,27109,27110
```

```
              VARIABLE LOCATION SUMMARY          DATE: 10/08/2003
              PATENT APPLICATION:  US/10/674,124      TIME: 13:16:55

              Input Set : D:\seqlist.txt
              Output Set: N:\CRF4\10082003\J674124.raw
```

of n's or Xaa's(NEW RULES):
 of n's and/or Xaa's have been detected in the Sequence Listing.
 of <220> to <223> is MANDATORY if n's or Xaa's are present.
<220> to <223> section, please explain location of n or Xaa, and which
idue n or Xaa represents.

```
#:28;  N Pos.  34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53
#:28;  N Pos.  54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73
#:28;  N Pos.  74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93
#:28;  N Pos.  94,95,96,97,98,99,100,101,102,103,104,105,106,107,108,109
#:28;  N Pos.  110,111,112,113,114,115,116,117,118,119,120,121,122,123,124
#:28;  N Pos.  125,126,127,128,129,130,131,132,133
#:863;  N Pos. 94
#:912;  N Pos. 147
#:3742;  N Pos.  71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89
#:3742;  N Pos.  90,91,92,93,94,95,96,97,98,99,100,101,102,103,104,105,106
#:3742;  N Pos.  107,108,109,110,111,112,113,114,115,116,117,118,119,120
#:3742;  N Pos.  121,122,123,124,125,126,127,128,129,130,131,132,133,134
#:3742;  N Pos.  135,136,137,138,139,140,141,142,143,144,145,146,147,148
#:3742;  N Pos.  149,150,151,152,153,154,155,156,157,158,159,160,161,162
#:3742;  N Pos.  163,164,165,166,167,168,169,170
#:3745;  N Pos.  143,144
#:3746;  N Pos.  143,144
#:4010;  N Pos.  207,211,212,214,216,243,245,247,249,254,256,258,263,265
#:4010;  N Pos.  267,269,271,275,278
#:4931;  N Pos.  181,231,233
#:4934;  N Pos.  6
#:4935;  N Pos.  198
#:4936;  N Pos.  91,108
#:5073;  N Pos.  298
#:5452;  N Pos.  312
#:5742;  N Pos.  331,339
#:5895;  N Pos.  157,158,159,160,161,162,163,164,165,166,167,168,169,170
#:5895;  N Pos.  171,172,173,174,175,176,177,178,179,180,181,182,183,184
#:5895;  N Pos.  185,186,187,188,189,190,191,192,193,194,195,196,197,198
#:5895;  N Pos.  199,200,201,202,203,204,205,206,207,208,209,210,211,212
#:5895;  N Pos.  213,214,215,216,217,218,219,220,221,222,223,224,225,226
#:5895;  N Pos.  227,228,229,230,231,232,233,234,235,236,237,238,239,240
#:5895;  N Pos.  241,242,243,244,245,246,247,248,249,250,251,252,253,254
#:5895;  N Pos.  255,256
#:5994;  N Pos.  67
#:6080;  N Pos.  393,449
#:6525;  N Pos.  262,263,264,265,266,267,268,269,270,271,272,273,274,275
#:6525;  N Pos.  276,277,278,279,280,281,282,283,284,285,286,287,288,289
#:6525;  N Pos.  290,291,292,293,294,295,296,297,298,299,300,301,302,303
#:6525;  N Pos.  304,305,306,307,308,309,310,311,312,313,314,315,316,317
#:6525;  N Pos.  318,319,320,321,322,323,324,325,326,327,328,329,330,331
#:6525;  N Pos.  332,333,334,335,336,337,338,339,340,341,342,343,344,345
#:6525;  N Pos.  346,347,348,349,350,351,352,353,354,355,356,357,358,359
```

VARIABLE LOCATION SUMMARY   DATE: 10/08/2003
PATENT APPLICATION: **US/10/674,124**   TIME: 13:16:55

Input Set : **D:\seqlist.txt**
Output Set: **N:\CRF4\10082003\J674124.raw**

```
#:6525; N Pos. 360,361
#:7259; N Pos. 59
#:7624; N Pos. 97,99
#:7989; N Pos. 71
#:8303; N Pos. 49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67
#:8303; N Pos. 68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86
#:8303; N Pos. 87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103
#:8303; N Pos. 104,105,106,107,108,109,110,111,112,113,114,115,116,117
```

VERIFICATION SUMMARY   DATE: 10/08/2003
PATENT APPLICATION: **US/10/674,124**   TIME: 13:16:55

          Input Set : **D:\seqlist.txt**
          Output Set: **N:\CRF4\10082003\J674124.raw**

3 M:270 C: Current Application Number differs, Replaced Current Application Number
37 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:28
38 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:0
41 Repeated in SeqNo=28
8637 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:863
8637 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:863
8637 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:863 after pos.:60
0264 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:912
0264 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:912
0264 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:912 after pos.:120
26228 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:3742
26232 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:3742
26235 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3742 after pos.:60
41 Repeated in SeqNo=3742
26346 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:3745
26346 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:3745
26346 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3745 after pos.:120
26383 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:3746
26383 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:3746
26383 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3746 after pos.:120
35639 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:4010
35639 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:4010
35639 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4010 after pos.:180
41 Repeated in SeqNo=4010
67364 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:4931
67364 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:4931
67364 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4931 after pos.:180
67463 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:4934
67463 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:4934
67463 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4934 after pos.:0
67504 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:4935
67504 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:4935
67504 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4935 after pos.:180
67531 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:4936
67531 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:4936
67531 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4936 after pos.:60
72172 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:5073
72172 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:5073
72172 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5073 after pos.:240
85187 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:5452
85187 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:5452
85187 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5452 after pos.:300
95157 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:5742
95157 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:5742
95157 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5742 after pos.:300
00438 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:5895
00438 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:5895
00438 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5895 after pos.:120

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Input Set : D:\seqlist.txt
Output Set: N:\CRF4\10082003\J674124.raw

```
41 Repeated in SeqNo=5895
03877 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:5994
03877 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:5994
03877 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5994 after pos.:60
06835 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:6080
06835 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:6080
06835 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6080 after pos.:360
41 Repeated in SeqNo=6080
21820 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:6525
21820 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:6525
21820 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6525 after pos.:240
41 Repeated in SeqNo=6525
46228 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:7259
46228 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:7259
46228 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7259 after pos.:0
58531 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:7624
58531 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:7624
58531 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7624 after pos.:60
70586 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:7989
70586 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:7989
70586 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7989 after pos.:60
81124 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:8303
81124 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:8303
81124 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8303 after pos.:0
41 Repeated in SeqNo=8303
96787 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:8774
96787 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:8774
96787 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8774 after pos.:240
07698 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:9093
07698 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:9093
07698 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9093 after pos.:180
09191 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:9138
09191 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:9138
09191 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9138 after pos.:240
52518 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:13393
52518 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13393 after pos.:360
53798 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13431 after pos.:0
65508 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13779 after pos.:120
69639 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13900 after pos.:240
71026 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13941 after pos.:0
71057 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13942 after pos.:0
41 Repeated in SeqNo=13942
74427 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14044 after pos.:0
78017 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14148 after pos.:0
79327 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14188 after pos.:0
80750 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14231 after pos.:60
85639 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14376 after pos.:0
41 Repeated in SeqNo=14376
89894 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14501 after pos.:60
```

VERIFICATION SUMMARY   DATE: 10/08/2003
PATENT APPLICATION: **US/10/674,124**   TIME: 13:16:55

Input Set : **D:\seqlist.txt**
Output Set: **N:\CRF4\10082003\J674124.raw**

```
92778 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14587 after pos.:60
00166 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14805 after pos.:0
00308 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14809 after pos.:60
00817 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14824 after pos.:60
```